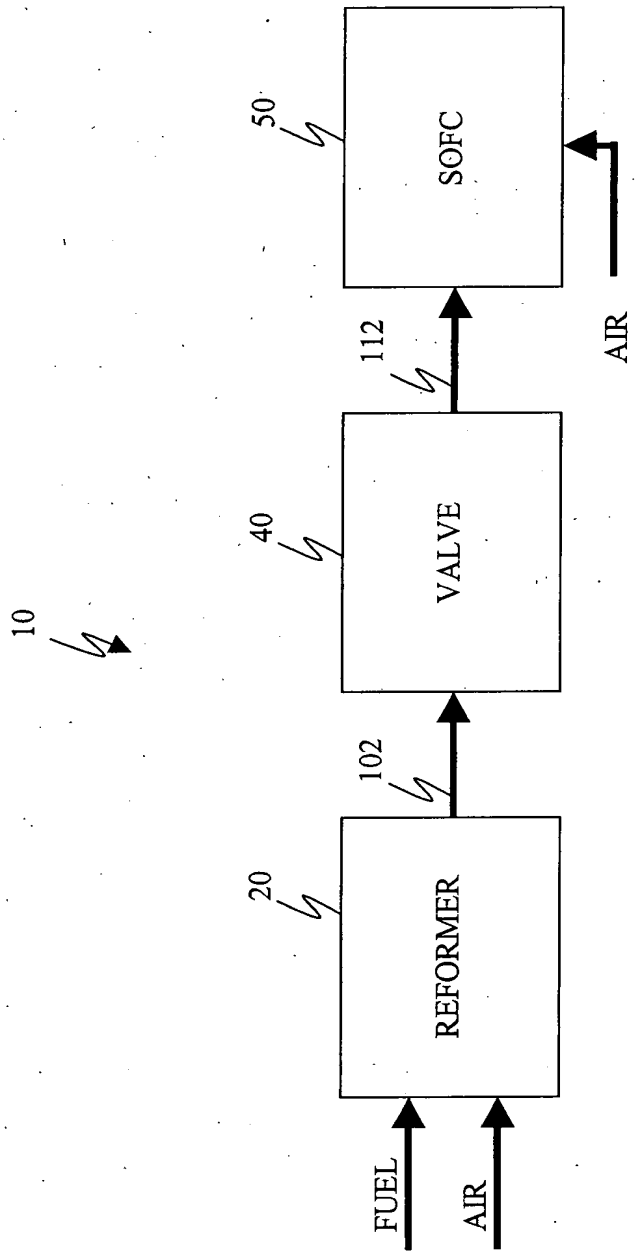


FIG. 1

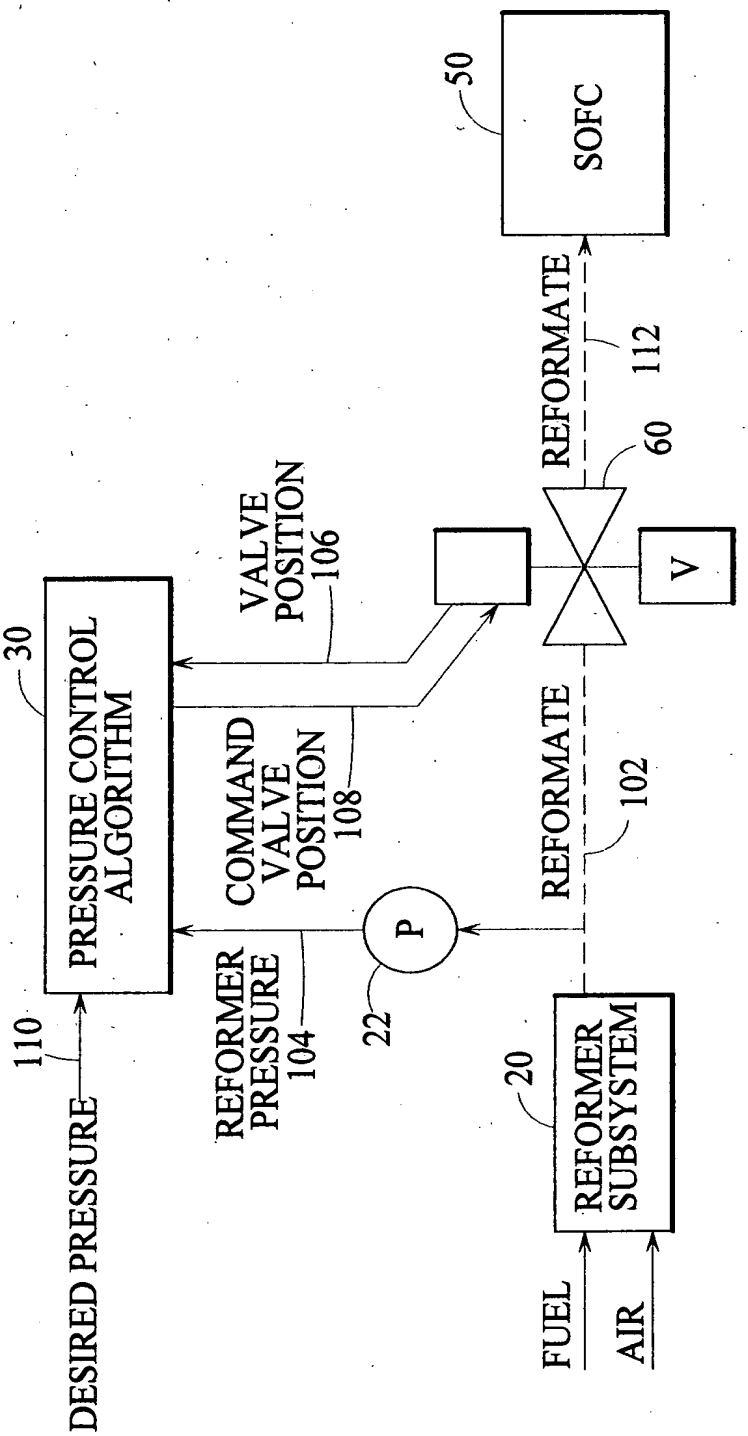

50
SOFC
REFORMATE
112
60
V
VALVE POSITION
106
30
PRESSURE CONTROL ALGORITHM
COMMAND VALVE POSITION
108
REFORMATE
102
110
DESIRED PRESSURE
REFORMER PRESSURE
104
P
22
20
REFORMER SUBSYSTEM
FUEL
AIR

FIG. 2

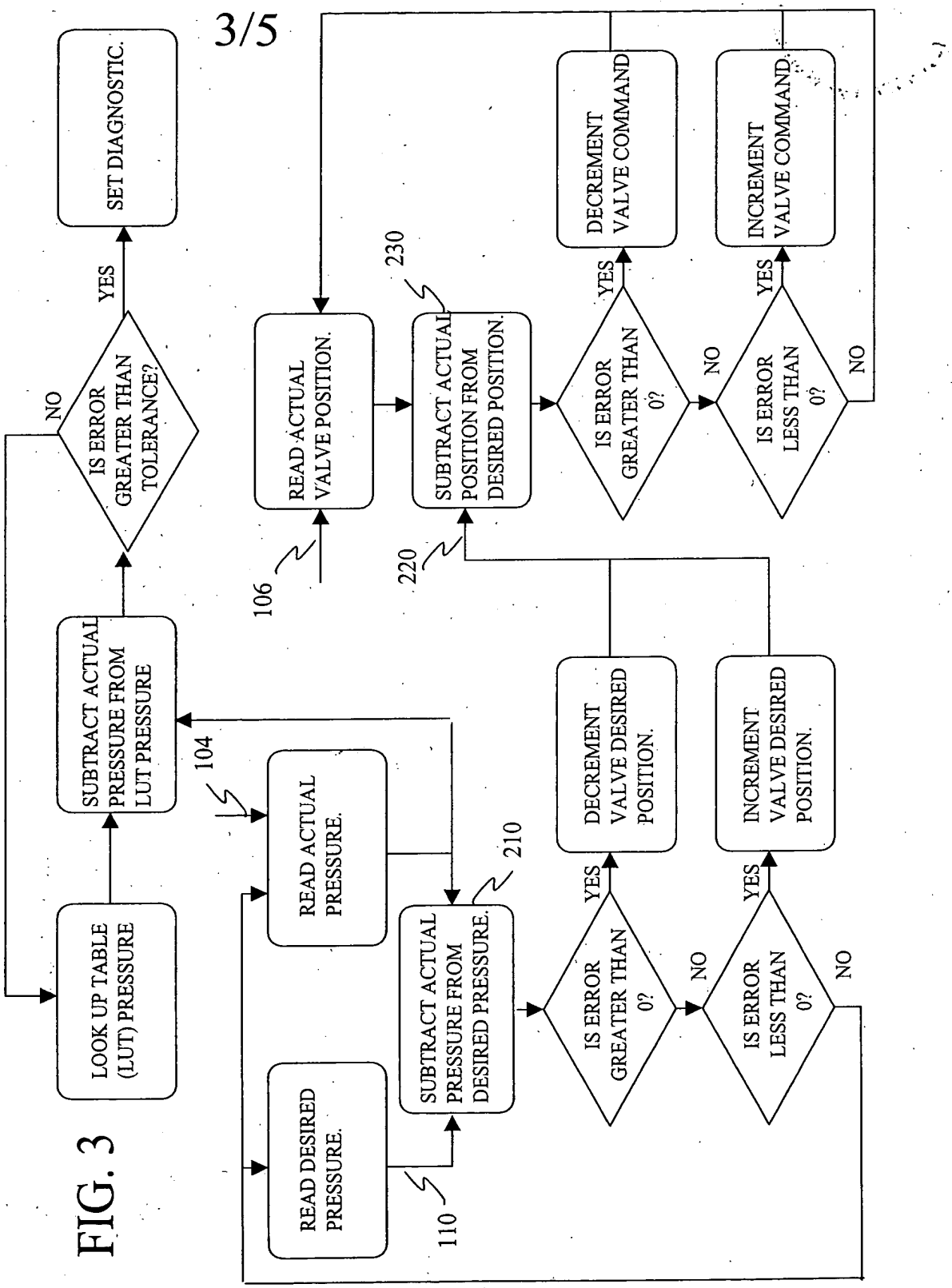

LOOK UP TABLE (LUT) PRESSURE
SUBTRACT ACTUAL PRESSURE FROM LUT PRESSURE
IS ERROR GREATER THAN TOLERANCE?
NO
YES
SET DIAGNOSTIC.
READ DESIRED PRESSURE.
110
READ ACTUAL PRESSURE.
104
SUBTRACT ACTUAL PRESSURE FROM DESIRED PRESSURE.
210
IS ERROR GREATER THAN 0?
YES
NO
DECREMENT VALVE DESIRED POSITION.
IS ERROR LESS THAN 0?
YES
NO
INCREMENT VALVE DESIRED POSITION.
READ ACTUAL VALVE POSITION.
106
SUBTRACT ACTUAL POSITION FROM DESIRED POSITION.
220
230
IS ERROR GREATER THAN 0?
YES
NO
DECREMENT VALVE COMMAND
IS ERROR LESS THAN 0?
YES
NO
INCREMENT VALVE COMMAND.

FIG. 3

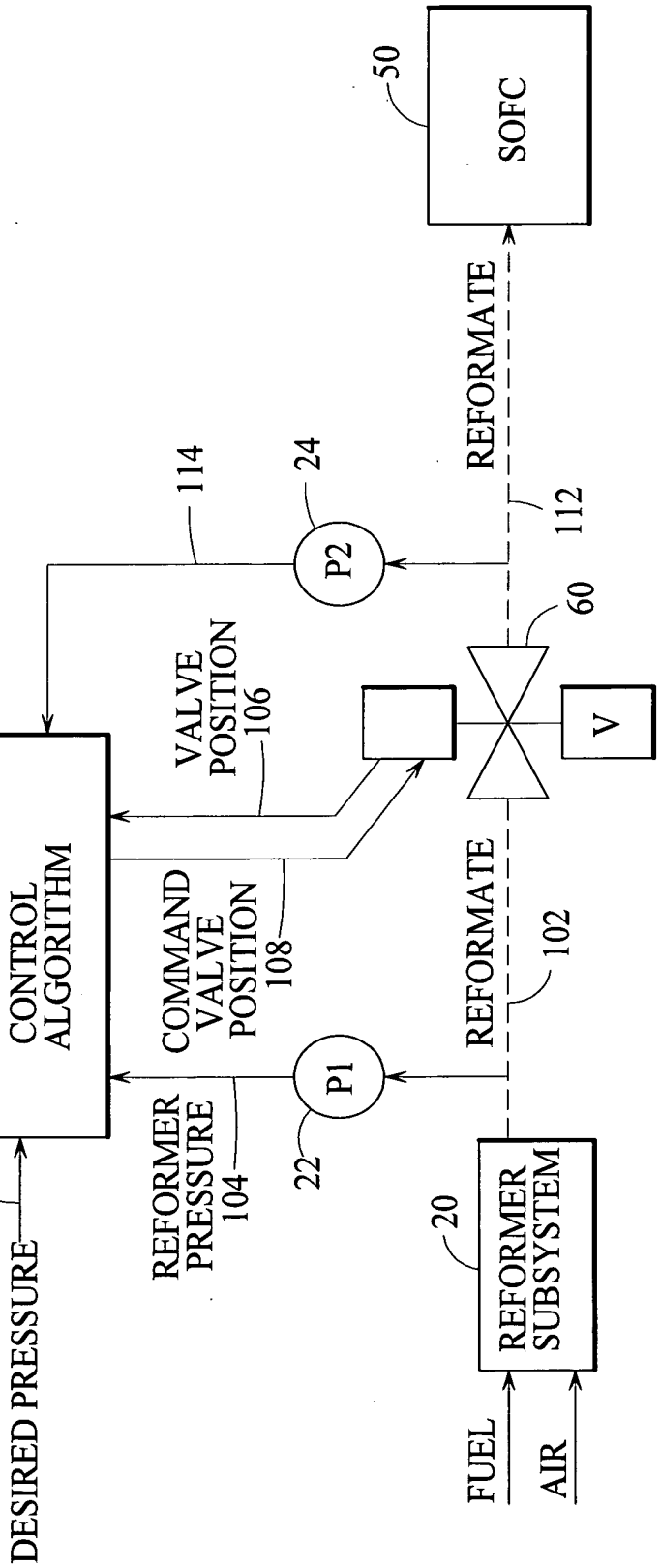
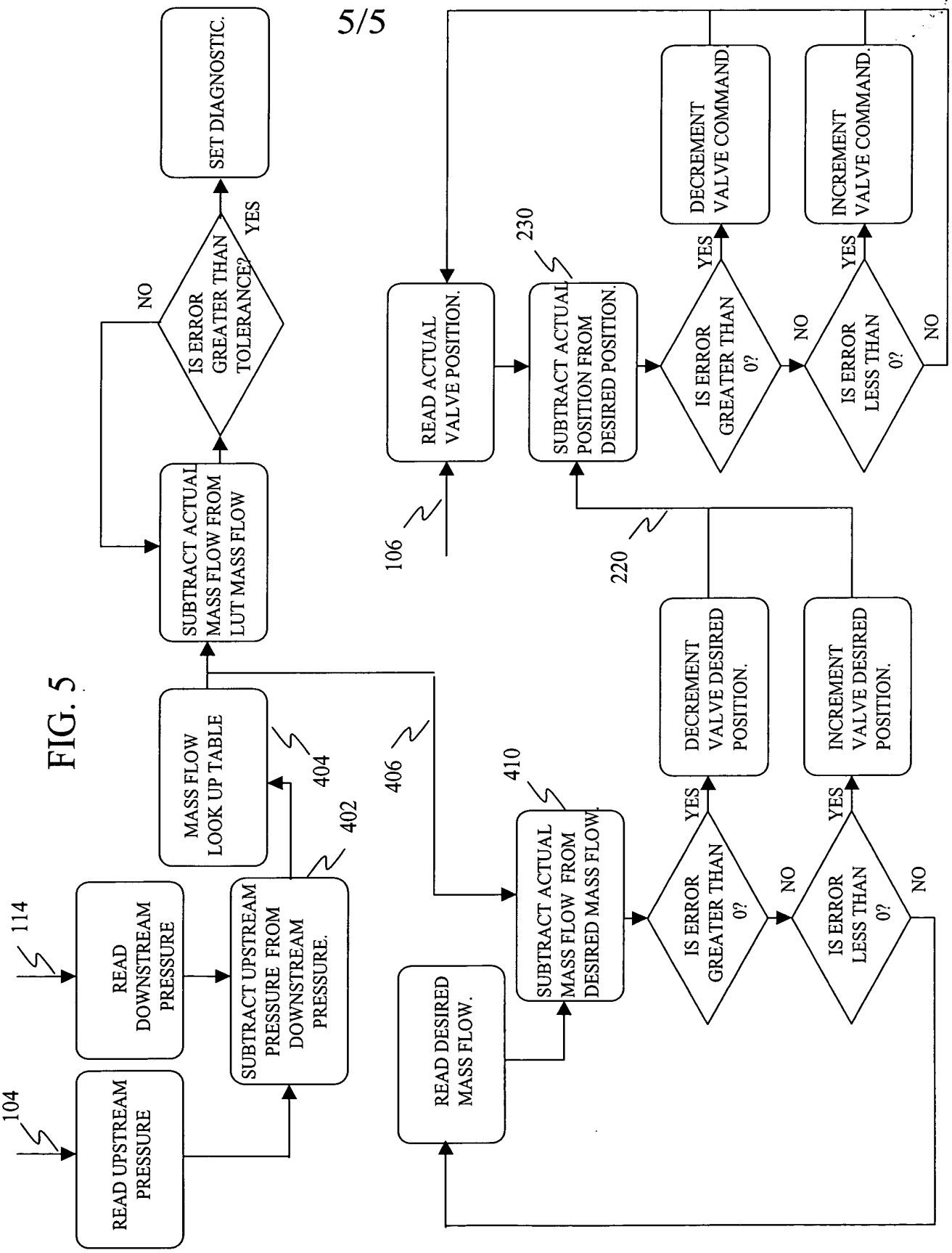

50
SOFC
REFORMATE
112
24
114
P2
60
VALVE POSITION
106
V
30
CONTROL ALGORITHM
COMMAND VALVE POSITION
108
REFORMATE
102
110
DESIRED PRESSURE
REFORMER PRESSURE
104
P1
22
20
REFORMER SUBSYSTEM
FUEL
AIR

FIG. 4

FIG. 5


READ UPSTREAM PRESSURE
104
READ DOWNSTREAM PRESSURE
114
SUBTRACT UPSTREAM PRESSURE FROM DOWNSTREAM PRESSURE.
402
MASS FLOW LOOK UP TABLE
404
SUBTRACT ACTUAL MASS FLOW FROM LUT MASS FLOW
IS ERROR GREATER THAN TOLERANCE?
NO
YES
SET DIAGNOSTIC.
406
READ DESIRED MASS FLOW.
410
SUBTRACT ACTUAL MASS FLOW FROM DESIRED MASS FLOW.
IS ERROR GREATER THAN 0?
YES
NO
DECREMENT VALVE DESIRED POSITION.
IS ERROR LESS THAN 0?
YES
NO
INCREMENT VALVE DESIRED POSITION.
220
106
READ ACTUAL VALVE POSITION.
230
SUBTRACT ACTUAL POSITION FROM DESIRED POSITION.
IS ERROR GREATER THAN 0?
YES
NO
DECREMENT VALVE COMMAND
IS ERROR LESS THAN 0?
YES
NO
INCREMENT VALVE COMMAND.